United Nations E/CN.17/ESD/2001/L.1

Economic and Social Council

Distr.: Limited
7 February 2001

Original: English

Ad Hoc Open-ended Intergovernmental Group of Experts on Energy and Sustainable Development
Second session
New York, 26 February-2 March 2001

Negotiating text

Draft decision submitted by the Co-Chairpersons of the Group of Experts

A. General considerations

1. Energy is central to achieving the interrelated economic, social and environmental aims of sustainable development.

2. The magnitude and scale of the energy problem facing the world today in relation to sustainable development and environmental objectives can be gauged by the fact that nearly one third of the global population of 6 billion continue to lack access to modern energy and transportation services. Wide disparities exist in the levels of energy consumption within and between countries. Current patterns of energy production, distribution and utilization carry the risk of becoming unsustainable. The health and environmental consequences of energy production and utilization have become major challenges. It has therefore become imperative to pursue sustainable energy paths for a sustainable energy future for all.

3. In both developed and developing countries, the challenge ahead requires political will, as well as commitment to innovation and to applying energy-efficient, environmentally sound, cost-effective technologies and systems to all sectors of the economy. Energy resources are plentiful, and environmentally sound technological options are available to make a sustainable energy future a reality for all. Ensuring adequate access to energy for all, in an environmentally, socially and economically sustainable way, will require considerable efforts and substantial investments.

4. In order to move the world energy systems towards greater sustainability, determined action by all stakeholders will be needed. Change will not be driven by resource constraints for a very long time to come. Greater sustainability of the energy systems can be achieved by providing universal access to modern energy carriers, by giving a greater share of the energy mix to renewable energies, by improving energy efficiency and by placing greater reliance on advanced energy technologies. Policies relating to energy for sustainable development intended to promote these shared objectives will address simultaneously all the issues of economic and social development and of the responsible management of environmental resources.

5. Appropriate policies to improve the ways to sustainability of energy paths basically rest with Governments. However, a participatory approach involving all relevant stakeholders could facilitate progress. Because energy is an area with strong interdependencies among countries, international cooperation is essential for reaching a consensus not only on shared goals of action but also on the framework for regional and international cooperation.

01-24285 (E) 200201

The way in which energy issues are addressed in a country depends on the national energy situation. Therefore, a range of options with corresponding policy goals and strategies becomes necessary to address the issues involved. Accordingly, a number of options and strategies for action that could effect a change in the way energy is dealt with are delineated in the present decision. The choice of any specific action would obviously depend on the domestic situation.

B. General principles for policy action

6. Governments and relevant regional and international organizations, as well as other relevant stakeholders, are invited to consider the following general principles in their energy policies:

(a) Combining the increased use of renewable energy sources, the more efficient use of energy, the use of advanced fossil fuel technologies and the sustainable use of traditional energy resources which could meet the growing needs for energy services in a longer-term sustainable way;

(b) Integrating energy considerations in policy-making of major energy consuming sectors such as transport, industry, agriculture, urban planning and construction;

(c) Establishing appropriate framework conditions to attract investments, addressing regulatory issues to allow markets to function in harmony with the objectives of sustainable development and ensuring public participation;

(d) Developing appropriate energy services in rural areas through the application of the most cost-effective and environmentally friendly technologies, the deployment of specific energy service delivery structures and the development of renewable energy sources, including modern biomass;

(e) Supporting research and development for the above-mentioned activities and measures, sustainable transport systems, and enhancing regional and international cooperation for a sustainable energy future;

(f) Ensuring security of energy supply and security of energy demand so as to achieve market stability and better accessibility;

(g) Enhancing energy efficiency by establishing programmes for the achievement of national energy efficiency goals and by accelerating the deployment of energy-efficient technologies;

(h) Supporting greater reliance on renewable energies in both grid-connected and decentralized systems;

(i) Optimizing the use of fossil fuels through the increased development and use of advanced fossil fuel technologies;

(j) Enhancing regional and international cooperation for sustainable energy futures.

C. Key issues

7. Concerning the key issues of energy identified at the first session of the Ad Hoc Open-ended Intergovernmental Group of Experts on Energy and Sustainable Development, the Commission on Sustainable Development recommends the following options and strategies for implementation in each key issue to achieve the objectives of sustainable development.

1. Accessibility of energy

Challenges

8. Access to energy is crucial to economic and social development, and alleviation of poverty. Improving accessibility of energy implies finding ways and means by which energy services can be delivered reliably, affordably and in an environmentally sound, economically viable and socially acceptable manner.

Recommendations

9. Governments are encouraged to:

(a) Establish or strengthen national arrangements for promoting energy accessibility within the country;

(b) Improve access to sustainable biomass and fuelwood supplies, and commercializing biomass operations, including the use of agricultural residues;

(c) Progressively shift to liquid and gaseous fossil fuels;

(d) Develop locally available energy resources for greater energy security through diversification;

(e) Support electricity services based on grid extension and/or decentralized energy technologies;

(f) Strengthen national research and development institutions centres relating to all aspects of sustainable energy, including renewable and advanced fossil fuel technology and energy efficiency;

(g) Promote an enabling environment where public entities, the private sector or energy cooperatives can engage in the generation, transmission and distribution of electricity on a commercial basis.

2. Energy efficiency

Challenges

10. Energy efficiency is a win-win solution, but currently energy efficiency has not reached its potential. Barriers to achieving a significant portion of the energy efficiency potential involve both market-related and institutional issues.

Recommendations

11. Governments are encouraged to:

(a) Strengthen information dissemination and public awareness programmes to mobilize all stakeholders;

(b) Establish an enabling environment for encouraging wider-scale market participation of private sector energy services companies (ESCOs) to promote investments in energy efficiency;

(c) Improve energy efficiency codes and standards for appliances, equipment and buildings;

(d) Provide incentives for energy conservation in all economic sectors;

(e) Develop and execute national energy efficiency strategies, including the establishment of indicative goals for energy efficiency improvements in all sectors of society, together with cost-effective policies and measures to achieve these goals;

(f) Strengthen capacity-building, including education, training and information dissemination, ranging from energy planning to technical engineering, to improve the performance of energy and materials use;

(g) Accelerate development and deployment of energy-efficient technologies;

(h) Rapidly integrate energy efficiency considerations into the planning of long-lived energy consuming infrastructures, notably transport, urban layout, industry, agriculture and tourism;

(i) Increase the efficiency of technologies used in the production and consumption of fossil fuels.

3. Renewable energy

Challenges

12. The main challenge lies in the development and utilization of renewable energy technologies, such as solar, wind, geothermal, biomass and hydropower, on a scale wide enough to significantly contribute to a sustainable energy future. Despite some progress in promoting renewable energy applications in recent years, numerous constraints and barriers continue to exist.

Recommendations

13. Governments are encouraged to:

(a) Develop and implement national and regional policies and measures to create an enabling environment for development and utilization of renewable energy sources;

(b) Further enhance the role of the private sector in disseminating renewable energy technologies and the implementation of specific incentives and regulatory frameworks;

(c) Strengthen research, development and demonstration, and industrial and organizational capacities in the field of renewable energy utilization, and eliminate obstacles to the import and export of renewable energy equipment.

4. Advanced fossil fuel technologies

Challenges

14. Given that fossil fuels will continue to play a dominant role in the energy mix in the decades to come, the deployment of existing advanced and cleaner fossil fuel technologies should be increased. More efforts should go into supporting the further development of those technologies.

Recommendations

15. Governments are encouraged to:

(a) Develop and use more efficient fossil fuel-fired power plants, buildings, appliances and transportation vehicles;

(b) Substitute lower-carbon fuels or carbon-free sources for the current fossil fuels, such as natural gas for coal or oil;

(c) Enhance research, development and demonstration in the area of advanced fossil fuel technologies, leading to near-zero emissions;

(d) Promote wide-scale applications of carbon capture and storage, as well as carbon sequestration;

(e) Encourage cooperation between Governments and manufacturing industries in a voluntary programme framework for cleaner fossil fuel technology deployment.

5. Nuclear energy technologies

Challenges

16. Nuclear power is associated with a number of concerns, namely, nuclear safety, spent fuel and waste management and proliferation of fissile material, that are perceived as serious risks in many countries. Therefore, the development of cost-effective solutions to these problems and the achievement of public confidence in these solutions will determine the extent to which nuclear energy technologies will be able to contribute to a sustainable energy future.

Recommendations

17. Governments are encouraged to:

(a) Support national efforts in issues of nuclear safety and spent fuel and waste management;

(b) Harmonize safety requirements across countries;

(c) Promote a high level of nuclear safety worldwide through international oversight by relevant international organizations, particularly the International Atomic Energy Agency (IAEA), and also by strengthening independent national regulatory agencies;

(d) Improve the transparency in nuclear safety-related decisions;

(e) Prevent proliferation of fissile material through IAEA safeguards and promotion of the Treaty on the Non-Proliferation of Nuclear Weapons.[1]

6. Rural energy

Challenges

18. Access to affordable modern energy carriers is a prerequisite of implementing the following goal accepted by the international community: to halve the proportion of people living on less than US$1/day by the year 2015. Despite enormous efforts to improve energy services to rural populations in the past 20-30 years, the unserved population has remained about the same in absolute numbers — 2 billion people. Although there is a growing recognition of the importance of an integrated approach to rural development, and of the linkages among energy, agriculture and environment, efforts at finding the most appropriate solution to the energy problems of rural areas are hampered by insufficient attention to rural development in general, and to rural energy needs in particular. Meeting the energy needs of poor and dispersed rural communities with targeted actions is a major challenge. An effective strategy to address the energy needs of rural populations is to promote the climbing of the energy ladder. This implies moving from simple biomass fuels to the most convenient, efficient form of energy appropriate to the task at hand, usually liquid or gaseous fuels for cooking and heating and electricity for most other uses.

Recommendations

19. Governments are encouraged to:

(a) Strengthen and, where appropriate, establish national policies for rural energy development and introduce regulatory systems to promote access to energy in rural areas;

(b) Develop, where necessary, specific energy service delivery structures adapted to rural needs (including special tariffs, appropriate licensing of service providers, energy centres offering combinations of water pumping, refrigeration for health needs and for food processing and motive power for small-scale industry, telephone, television and lighting);

(c) Promote local energy enterprises as employment opportunities, enhance local private entrepreneurs and develop the capacity of local dealers to sell/maintain equipment, building on local retail networks and relationships;

(d) Take into consideration the health concerns of women and children in rural energy programmes;

(e) Promote indicators to monitor progress in line with the overall development goals.

7. Energy and transport

Challenges

20. The challenge is to promote an integrated approach to sustainable transport systems, which is hampered by the lack of awareness of options, information and infrastructure.

Recommendations

21. Governments are encouraged to:

(a) Rationalize transportation demand;

(b) Encourage transportation mode changes;

(c) Raise the energy efficiency of each transportation mode;

(d) Promote the use of cleaner fuels;

(e) Integrate urban planning and transportation planning;

(f) Progressively eliminate leaded gasoline, with effective technical and financial support to developing countries and economies in transition to achieve the goal.

D. Overarching issues

1. Research and development

22. The enhancement of research and development, at the national, regional and international levels, of advanced and cleaner technologies and more efficient energy technologies, as well as renewable energy technologies, is a prerequisite of achieving a global sustainable energy future. This calls for increasing both public and private sector investments independently or through joint public-private partnerships and international and regional collaborations.

2. Information-sharing and dissemination

23. Information- and knowledge-sharing on technologies and policies facilitates global efforts to achieve a sustainable energy future. Very often the lack of such information and knowledge precludes countries from adopting new approaches in energy planning and technology applications.

3. Making markets work better

24. Driven by the forces of competition, markets often do a better job than administered systems in allocating resources; but unless proper incentives are created, the marketplace fails to adequately account for the social and environmental costs of energy provision and use. Policies that reduce market distortions would give energy that is compatible with sustainable development (renewable sources, energy efficiency measures, and new and advanced fossil fuel technologies) a considerably better market position relative to current uses and practices. Governments should re-regulate markets in such a way that they are supportive of sustainable development, and should overcome market barriers to a sustainable energy future for all.

4. Technology transfer

25. Developing countries need access to energy technologies, which facilitate their efforts to achieve sustainable development. The development of technologies in developing countries, as well as the transfer of technologies from industrialized countries to developing countries, could be enhanced and assisted through joint research and development programmes, venture partnerships and commercial channels with concessional financing. At the same time, an enabling national and international environment for national and international private investment flow will greatly enhance the transfer of technology. Large improvements in energy efficiency and sustainability can be achieved through optimal use of currently available technologies and improved energy management techniques. Where possible, industrialized countries should assist developing countries in securing better access to relevant technologies specified in this decision, including the most modern technologies.

5. Capacity-building

26. Existing disparity in local capacity between developing and industrialized countries is a major obstacle for information-sharing, and technology transfer as well as financial flow. It is imperative that institutions, infrastructures and human resources in developing countries be strengthened and that technological leadership in developing countries be fostered through international public and private cooperation together with national commitments. Special efforts should be made for least developed countries and small island developing States. Development banks, the United Nations Development Programme (UNDP) and other relevant agencies and the regional commissions of the United Nations, and bilateral development agencies should focus on capacity-building in development cooperation. International financial institutions should, through their lending policies, support capacity-building and technology transfer.

6. Mobilization of financial resources

27. Developing countries should be assisted by industrialized countries and relevant international organizations through provision of adequate financial resources to enable them to adopt sustainable energy policies and technologies. Many Governments have initiated reforms aimed at improving regulatory frameworks and institutional set-ups in order to attract private sector funding. Specific policies have been introduced to induce the flow of investment capital for sustainable energy technology. Official development assistance (ODA) to developing countries continues, nevertheless, to be important even though financing of energy infrastructure projects in countries with developing and transitional economies has been shifting from Governments, State-owned utilities and multilateral financial institutions to domestic and international private financial firms and energy companies.

7. Multi-stakeholder approach and public participation

28. Energy solutions that are compatible with sustainable development require the participation of all stakeholders and the involvement of the public at large.

E. Regional cooperation

29. The Commission notes with appreciation the efforts made at the regional level and by interest groups to discuss the key issues and formulate regional positions and programmes of action to promote energy for sustainable development. It welcomes the statements that have resulted from these deliberations, recognizing that they provide valuable inputs to the work of the Commission. Moreover, it encourages the Governments involved in these regional deliberations to actively promote the implementation of the resulting programmes of action.

Regional endeavours

30. From these statements, the Commission recommends implementation of the following regional endeavours which will require international support:

(a) Strengthening and, where appropriate, establishing regional energy institutions or arrangements for enhancing regional and international cooperation in, inter alia:

(i) Conducting in-depth studies to promote sustainable development in the energy sector in the region, including social, economic and environmental situations of the region, and energy alternatives that support sustainable development;

(ii) Promoting training and exchange of experiences in energy efficiency, renewable energy and advanced fossil fuel technologies and lessons learned;

(iii) Strengthening and, where appropriate, establishing regional networks of centres of excellence for the exchange of information and experience in the research, development and application of renewable energy, advanced fossil fuel and energy efficiency technologies;

(iv) Strengthening and, where appropriate, establishing regional information and dissemination capabilities to provide information to the energy service industry on market opportunities and energy efficiencies infrastructure and information to consumers on the benefits of energy efficiency measures;

(b) Promoting, at the regional level, rural electrification projects using sustainable energy

sources including renewables, and supporting local efforts to provide energy supplies to their basic infrastructure, as well as launching and supporting income-generating activities;

(c) Strengthening and, where appropriate, establishing regional cooperation arrangements for promoting cross-border energy trade, including the interconnection of electricity grids and oil and natural gas pipelines;

(d) Strengthening and, where appropriate, establishing dialogue forums between regional producers and consumers of energy;

(e) Promoting cooperation among the concerned countries of the region and with international organizations to improve development and production of hydrocarbon fields through integrated cost reduction, enhanced operational efficiency and application of advanced technology;

(f) Fostering regional cooperation in undertaking research and development on energy efficiency, renewable energy and advanced fossil fuel technologies.

F. International cooperation

Message to other intergovernmental bodies

31. Virtually like no other issue, protection of the atmosphere primarily from the effects of energy production and use will continue to demand concerted international cooperation to arrest and hopefully reverse the negative impacts on the atmosphere. Therefore, the Commission emphasizes the importance of achieving concrete agreements on the modalities of the implementation of the Kyoto Protocol[2] to the United Nations Framework Convention on Climate Change,[3] and urges the Conference of the Parties to the Convention at its extended sixth session in 2001 to continue its efforts to reach such agreements, and invites the climate change convention process, in particular the resumed sixth session of the Conference of the Parties, to consider the results and recommendations on energy for sustainable development of the ninth session of the Commission.

32. The World Summit on Sustainable Development in June 2002 will further adjust the priorities for the implementation of Agenda 21[4] based on the evaluation of progress made in the decade since the United Nations Conference on Environment and Development held in 1992. The Commission urges the Summit to give the issues related to energy priority and support or further strengthen the recommendations made here for the promotion of the achievement of the goals of energy for sustainable development. The Commission further invites the Summit to consider the follow-up to the energy issues.

33. The Commission, realizing that energy is a key ingredient of development, continues to promote efforts to meet the development needs of the least developed countries. Therefore, the Commission invites the Third United Nations Conference on the Least Developed Countries in May 2001 to examine and support the implementation of the relevant recommendations made here.

34. As many of the recommendations made here require financial means, the results of the high-level international intergovernmental event on financing for development to be convened in early 2002 will be particularly relevant. Therefore, the Commission urges the participants in the event to consider the special needs and circumstances of developing countries, specified here as relating to energy for sustainable development, and provide guidance on how the necessary financing can be obtained.

Possible options for guidance to the multilateral system

35. In order to effect improvements, pursuant to the results of the ninth session of the Commission on Sustainable Development on energy issues, in the functioning, coherence and coordination of the United Nations system with regard to energy for sustainable development, the Commission:

(a) Invites the Secretary-General to include in his report to the World Summit on Sustainable Development options for follow-up to energy issues in the United Nations system;

(b) Recommends the strengthening of the existing mechanism by converting the Ad Hoc Inter-Agency Task Force on Energy, a subsidiary body of the Inter-Agency Committee on Sustainable Development, into a regular body with individual entities identified as task managers for specific aspects of energy, and invites it to elaborate concrete ways and means to strengthen the role of the United Nations in the area of energy for sustainable development and to submit these

proposals for consideration by the World Summit on Sustainable Development;

(c) Recommends to the Economic and Social Council, in order to further advance the dialogue on energy for sustainable development, as appropriate, within existing United Nations structures, to examine the desirability and modalities of holding deliberations on energy in a segment of one of its upcoming substantive sessions;

(d) Also recommends to the Economic and Social Council to transmit to the General Assembly, as the supreme policy body of the United Nations, the outcome of the ninth session of the Commission for further action by the Assembly under the agenda item devoted to energy within the cluster on sustainable development;

(e) Further recommends to the Economic and Social Council to invite the Committee on Energy and Natural Resources for Development to continue to contribute constructively to energy deliberations within the United Nations system;

(f) Invites Governments to use existing United Nations mechanisms to continue the dialogue on issues related to sustainable energy, to share experiences on what does and what does not work, and to promote shared learning and the exchange of best practices.

International endeavours

36. The Commission recommends the following new actions and actions for heightened activity for international cooperation.

1. Continuing and enhancing development cooperation, as well as South-South cooperation, to assist developing countries in establishing and implementing their national policy frameworks in support of energy for sustainable development.

2. Governments of industrialized countries that have not yet fulfilled the commitments undertaken to reach the agreed United Nations target of 0.7 per cent of gross national product (GNP) for official development assistance (ODA) should do so as soon as possible.

3. In the interest of achieving market stability, the ongoing dialogue between producers and consumers of energy should be strengthened. Furthermore, other regional and international dialogues on energy issues among various stakeholders should be enhanced.

4. Exploring ways to increase financing support for energy for sustainable development, inter alia, through the incorporation of energy for sustainable development considerations in development cooperation programmes and through the lending policies and programme activities of international financial institutions. In this context, consideration should also be given to how ODA can be best used to leverage private funds for the development of energy solutions that are compatible with sustainable development.

5. Launching a "natural gas exploration and development initiative", in particular for least developed countries, financed through appropriate mechanisms.

6. Establishing a network of Consultative Group on International Agricultural Research (CGIAR)-type centres of excellence by linking qualified national energy centres into a network focusing on energy technologies for sustainable development.

7. Establishing an international energy information centre or clearing house that could support and promote capacity-building activities for sustainable energy development by improving accessibility to and availability of relevant information.

8. Promoting international public-private partnership cooperation programmes, along the lines of the recently initiated Global Compact, for promoting the next generation of energy-efficient, cleaner fossil fuel and renewable energy technologies.

9. Promoting decentralized energy market transformation for sustainable energy systems with a focus on rural areas and rural electrification.

10. Actions to transfer appropriate advanced and cleaner fossil fuel technologies to developing countries, with special provisions for the least developed countries, and to strengthen their capacity for acquisition of know-how and expertise, including South-South cooperation in sharing experiences concerning the successful

implementation of cleaner energy assistance programmes.

11. The expansion of existing international mechanisms or development of new mechanisms to identify risks and ensure that they are managed on a transparent basis and with an effective and equitable partnership between investors and host countries, for those developing countries that do not have institutional structures that are adequately prepared to deal with the scale of risk associated with major energy investments.

12. Strengthening of the existing mechanism and United Nations involvement in facilitating and financing, on favourable terms in line with Agenda 21, the access to and transfer of environmentally sound technologies and corresponding know-how, which are available mostly in the industrialized countries but also in some developing countries. Technology networking using low-cost modern communication interconnections could facilitate information-sharing to promote technology transfer in the renewable energy and clean fossil fuel technologies through international and regional cooperation.

13. Strengthening of existing mechanisms in the United Nations system to promote technology transfer for renewable energy technologies by organizing a data bank on application technologies, training experts, transferring technology, and facilitating the free exchange of international information on these technologies.

14. Fostering international cooperation in undertaking research and development on energy efficiency, renewable energy, and advanced fossil fuel technologies.

15. Creating partnerships between industrialized countries with ongoing research, development and demonstration efforts in the area of advanced fossil fuel technologies with near-zero emissions, and fossil fuel-rich developing countries, to speed up the dissemination of knowledge on these technologies and to allow realistic evaluation and application of those technologies in different regions.

16. Provision of soft loans by the international lending institutions to Governments for sharing the cost of the development of rural energy infrastructures with private sector investors.

Notes

[1] United Nations, *Treaty Series*, vol. 729, No. 10485.

[2] FCCP/CP/1997/7/Add.1, decision 1/CP.3, annex.

[3] A/AC.237/18 (Part II)/Add.1 and Corr.1, annex I.

[4] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.